

ABSTRACT OF THE DISCLOSURE

A semiconductor memory includes a refresh timer and an arbiter for determining the order of precedence between an access operation and a refresh operation, in order to automatically perform refresh operations inside the memory. A detecting circuit operates
5 in a test mode and outputs a detection signal indicating that the refresh operation is yet to be performed, when a new internal refresh request occurs before the refresh operation is performed. For example, the detection signal is output when the interval of access requests is short and no refresh operation can be inserted between the access operations. That is, in the semiconductor memory in which refresh operations are performed
10 automatically, it is possible to evaluate the minimum interval of supplying access requests. As a result, the evaluation time can be reduced with a reduction in the development period of the semiconductor memory.